

In the Claims:

Please cancel claims 12 and 22. Please amend the remaining claims to read as follows.

1. (Currently amended) A method of providing a medical implant delivery system in order to reduce damage to an internally coated medical implant of the delivery system during the expansion of the medical implant, the method comprising:

providing an internally coated medical implant having an inner surface and an outer surface, the inner surface of the implant at least partially coated with a coating;

selecting the number of folds of a multi-wing balloon to reduce the deformation of the internal coating of the medical implant when the medical implant is expanded by the folds of the balloon, wherein the number of folds is selected using an inverse relationship between the inner coating hardness and the number of folds, wherein less folds are selected for harder coatings and more folds are selected for softer coatings; and

providing a balloon catheter having a multi-wing balloon, the multi-wing balloon having the previously selected number of expandable folds.

2. (Previously presented) The method of claim 1 further comprising:

crimping the coated medical implant onto the multi-wing balloon.

3. (Previously presented) The method of claim 2 further comprising:

encircling the multi-wing balloon with a removable elastic membrane before crimping the coated medical implant onto the multi-wing balloon.

4. (Previously presented) The method of claim 1 wherein selecting the number of folds in the multi-wing balloon includes considering the number of cells in the coated medical implant.

5. (Previously presented) The method of claim 1 wherein the number of folds selected is also selected such that during expansion of the coated medical implant the internal surface coating remains substantially intact after the medical implant has been expanded.

6. (Previously presented) A method of reducing damage to an internally coated medical implant during the expansion of the medical implant, the method comprising:

providing an internally coated medical implant having an inner surface and an outer surface, the inner surface of the implant at least partially coated with a coating;

providing a balloon catheter having a multi-wing balloon, the multi-wing balloon having a previously selected number of expandable folds, the number of folds being selected to reduce the deformation of coating of the medical implant caused by the expansion of the multi-wing balloon during expansion of the coated medical implant; and

wherein the number of folds selected for the multi-wing balloon has an inverse relationship to the softness of the coating of the medical implant.

7. (Previously presented) The method of claim 1 wherein the multi-wing balloon expands in a sweeping spiral fashion.

8. (Previously presented) The method of claim 3 further comprising treating the removable elastic membrane to reduce the adhesion between the membrane and the coating on the coated medical implant.

9. (Previously presented) The method of claim 8 wherein the treatment includes coating the elastic membrane.

10. (Previously presented) The method of claim 8 wherein the treatment includes heating the elastic membrane.

11. (Previously presented) The method of claim 8 wherein the treatment includes polishing the surface of the elastic membrane.

12. (Canceled)

13. (Original) The method of claim 1 wherein the coating includes a therapeutic agent.

14. (Original) The method of claim 1 wherein the coating includes a bio-compatible polymer and a therapeutic agent.

15-18. (Canceled)

19. (Previously presented) The method of claim 8 wherein the treatment includes coating the elastic membrane and wherein the implant is a stent.

20. (Canceled)

21. (Previously presented) The coated medical implant delivery system of claim 8 wherein the elastic membrane has been treated on an outside surface to reduce the adhesion between the coating of the medical implant and the membrane wherein the elastic membrane has been treated on an inside surface to reduce the adhesion between the membrane and the balloon.

22. (Canceled)